WHAT IS CLAIMED IS:

1. An inverter device comprising:

a direct-current power supply having a positive electrode terminal and a negative electrode terminal;

a first set of switching elements including a plurality of switching elements connected in parallel;

a second set of switching elements including a plurality of switching elements connected in parallel, wherein each of the switching elements of the first set being connected in series with a corresponding one of the switching elements of the second set to form a pair of switching elements including a first switching element and a second switching element, between the positive electrode terminal and the negative electrode terminal of the direct-current power supply;

a plurality of fly-wheel diodes, each of the fly-wheel diodes being connected to each of the first switching element and the second switching element, wherein the first switching element and the second switching element being turned on and off alternately while changing a time ratio and a signal output at a node between the first switching element and the second switching element being supplied to an inductance load;

a first transistor that receives a control signal for turning on the first switching element, applies a power supply voltage to a control electrode of first switching element, and starts charging a miller capacitance of the first switching element;

a detection circuit that detects a timing at which a voltage of the

control electrode of the first switching element reaches a logic inversion voltage while the control signal for turning on the first switching element, and outputs a detection signal indicating the timing; and

a second transistor that receives the detection signal, applies the power supply voltage to the control electrode of the first switching element, and accelerates charging the miller capacitance.

2. The inverter device according to claim 1, wherein

the first switching element and the second switching element are negative metal-oxide semiconductor field-effect transistors respectively,

the first transistor and the second transistor are positive metal-oxide semiconductor transistors respectively, and

the detection circuit includes an EXCLUSIVE-OR circuit and a NAND circuit.

3. The inverter device according to claim 1, wherein the first switching element and the second switching element are provided in number of three units respectively, and the inductance load is a three-phase motor.

4. The inverter device according to claim 1, further comprising a third transistor connected between the first transistor and ground.

5. The inverter device according to claim 4, further comprising an inverter circuit that receives the control signal and supplies the control signal to the first transistor, the detection circuit and the third transistor.

6. An inverter device comprising:

a direct-current power supply having a positive electrode terminal and a negative electrode terminal;

a first set of switching elements including a plurality of switching elements connected in parallel;

a second set of switching elements including a plurality of switching elements connected in parallel, wherein each of the switching elements of the first set being connected in series with a corresponding one of the switching elements of the second set to form a pair of switching elements including a first switching element and a second switching element, between the positive electrode terminal and the negative electrode terminal of the direct-current power supply;

a plurality of fly-wheel diodes, each of the fly-wheel diodes being connected to each of the first switching element and the second switching element, wherein the first switching element and the second switching element being turned on and off alternately while changing a time ratio and a signal output at a node between the first switching element and the second switching element being supplied to an inductance load;

a first transistor that receives a control signal for turning on the first switching element, applies a power supply voltage to a control

electrode of first switching element, and starts charging a miller capacitance of the first switching element;

a detection circuit that detects a timing at which a potential difference between both signal electrodes of the first switching element reaches a logic inversion voltage while the control signal for turning on the first switching element, and outputs a detection signal indicating the timing; and

a second transistor that receives the detection signal, applies the power supply voltage to the control electrode of the first switching element, and accelerates charging the miller capacitance.

7. The inverter device according to claim 6, wherein

the first switching element and the second switching element are negative metal-oxide semiconductor field-effect transistors respectively,

the first transistor and the second transistor are positive metal-oxide semiconductor transistors respectively, and

the detection circuit includes a comparator circuit and a NAND circuit.

8. The inverter device according to claim 6, wherein the first switching element and the second switching element are provided in number of three units respectively, and the inductance load is a three-phase motor.

9. The inverter device according to claim 6, further comprising a third transistor connected between the first transistor and ground.

10. The inverter device according to claim 9, further comprising an inverter circuit that receives the control signal and supplies the control signal to the first transistor, the detection circuit and the third transistor.